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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/922,460	08/03/2001	Uwe Sydon	2001P11177US	1376

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Siemens Corporation
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EXAMINER

ZEWDU, MELESS NMN

ART UNIT PAPER NUMBER

2683

DATE MAILED: 02/14/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/922,460	SYDON, UWE	
	Examiner	Art Unit	
	Meless N. Zewdu	2683	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 14 December 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-10, 12 and 14-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12 and 14-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment (Appeal Brief)

1. This action is in response to the communication filed on 12/14/05.
2. Claims 1-10, 12 and 14-22 are pending in this action.
3. The objection to the Oath/Declaration, as defective, has been withdrawn in response to applicant's explanation in a response filed on 9/19/05.
4. The objection to claim 12 has been withdrawn in response to applicant's correction of the indicated problem therein.
5. Finality of the prosecution has been withdrawn in consideration of applicant's arguments and newly discovered prior art references issued to Amirijoo et al. (Amirijoo) (US 6,728,217 B1).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-2, 5-7, 9-13, 15-18 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar et al (6,526,030) in view of Amirijoo.

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As per claim 1: Rezaiifar discloses a method of changing a physical data rate of an air interface on a per channel basis (abstract, 1-3, col. 9 lines 53-67), the method comprising:

a) providing a plurality of logical communication channels, the plurality of logical communication channels being configured to communicate a signal (abstract, fig. 3-5, col. 7 lines 30-41);

b) providing a control channel that assigns data rates to the plurality of logical channels (col. 9 line 53 thru col. 10 line 17); and

c) changing the data rates of the plurality of logical channels on a per channel basis (fig. 4-6, col. 9 line 53 thru col. 10 line 39, and col. 11 line 66 thru col. 12 line 5). But, Rezaiifar does not explicitly teach about a control channel including interfered carrier information, as claimed by applicant. However, in a related field of endeavor, Amirijoo teaches about a system and method for modifying the data rate of data calls in a cellular network (see title), wherein the air interface data rate is dynamically changed by a change of channel coding to a lower or higher data rate based on the quality of the channel due to interference (see abstract; col. 2, lines 24-35; col. 9, lines 1-29). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Rezaiifar with that of Amirijoo for the advantage of improving the quality of data calls within a cellular network by dynamically changing the air interface data rate (see col. 2, lines 24-35).

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As per claim 2: Rezaiifar teaches a method, further comprising providing a high data rate channel (abstract, col. 8 lines 5-24).

As per claim 5: Rezaiifar teaches a method, further characterized in that the plurality of logical communication channels operate at a data rate selected by the control channel (col. 3 line 33-43).

As per claim 6: Rezaiifar teaches a method, further characterized in that the selected data rate is a multiple of a basic data rate (plurality of data rates) (col. 2 line 33-43).

As per claim 7: Rezaiifar teaches a method, further characterized in that logical communication channels having a high data rate communicate data information (abstract, col. 8 lines 5-24) and logical communication channels having a low data rate communicate voice information (abstract, col. 8 lines 5-24).

As per claim 9: Rezaiifar teaches a method, further characterized in that, the signal is communicated between a portable telephone and a base station (fig. 8C).

As per claim 10: Rezaiifar teaches an air interface (fig. 2 col. 5 lines 35-54) comprising:

at least one logical communication channel configured to communicate a signal (abstract); and

a control channel that assigns a data rate to each of the at least one logical communication channel (col. 9 line 53 thru col. 10 line 17), the control channel being configured to change the data rate assigned to each of the at least one logical communication channel (fig. 4-6, col. 9 line 53 thru col. 10 line 39, and col. 11 line 66 thru col. 12 line 5). But, Rezaiifar does not explicitly teach about changing a data rate

based upon signal quality information about data communicated with a signal, as claimed by applicant. However, in a related field of endeavor, Amirijoo teaches about a system and method for modifying the data rate of data calls in a cellular network (see title), wherein the air interface data rate is dynamically changed by a change of channel coding to a lower or higher data rate based on the quality of the channel due to interference (see abstract; col. 2, lines 24-35; col. 9, lines 1-29). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Rezaiifar with that of Amirijoo for the advantage of improving the quality of data calls within a cellular network by dynamically changing the air interface data rate (see col. 2, lines 24-35).

As per claim 11: Rezaiifar teaches the air interface of claim 10, further characterized in that the control channel changes the data rate assigned to each of the at least one logical communication channel based upon information about data communicated with the signal (col. 3 lines 34-43).

As per claim 12: Rezaiifar teaches an air interface, further characterized in that the information about data communicated with the signal comprises data type information (voice and data) (col. 8 lines 5-15).

As per claim 13: Rezaiifar teaches an air interface, further characterized in that the information about data communicated with the signal comprises signal quality information (col. 2 lines 57-65).

As per claim 15: Rezaiifar teaches an air interface, further characterized in that the control channel includes interfered carrier information (col. 5 lines 27-32).

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As per claim 16: Rezaiifar teaches an air interface, further characterized in that the control channel uses cyclic redundancy checks (CRC) to determine whether the at least one logical communication channels are disturbed (col. 5 line 64 thru col. 6 line 37).

As per claim 17: Rezaiifar teaches a wireless communication system which provides for low data rate services as well as higher data rate services without a reduction in sensitivity characteristic to switching modulation schemes (abstract, fig. 1), the communication system comprising:

- a communication device capable of receiving and sending communication signals (#6 fig. 1-2, col. 5 lines 13-34);

- a base station capable of receiving and sending communication signals (#4 fig. 1-2, col. 5 lines 13-34); and

- an air interface of wireless communications between the communication device and the base station (#24 fig. 2, col. 5 lines 35-63), the air interface including a control channel (abstract, fig. 3-4) and a plurality of logical communication channels (abstract, fig. 3-4, col. 7 lines 30-41), the control channel changing data rates to the plurality of logical communication channels on a per channel basis (col. 9 line 53 thru col. 10 line 17). But, Rezaiifar does not explicitly teach about changing a data rate based upon signal quality information about data communicated with a signal, as claimed by applicant. However, in a related field of endeavor, Amirijoo teaches about a system and method for modifying the data rate of data calls in a cellular network (see title), wherein the air interface data rate is dynamically changed by a change of channel

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coding to a lower or higher data rate based on the quality of the channel due to interference (see abstract; col. 2, lines 24-35; col. 9, lines 1-29). Therefore, it would have been obvious for one of ordinary skill in the art at the time the invention was made to modify the teaching of Rezaiifar with that of Amirijoo for the advantage of improving the quality of data calls within a cellular network by dynamically changing the air interface data rate (see col. 2, lines 24-35).

As per claim 18: the feature of claim 18 is similar to the feature of claim 2. Hence, claim 18 is rejected on the same ground and motivation as claim 2.

As per claim 20: the feature of claim 20 is similar to the feature of claim 7. Hence, claim 20 is rejected on the same ground and motivation as claim 7.

Claims 3-4, 8-9, 14, and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar in view of Amirijoo, as applied to claims 1, 10 and 17 above, and further in view of Sayers et al. (Sayers) (US 6,729,929).

As per claim 3: Rezaiifar teaches a method, further comprising using a frequency hopping spread spectrum method to transmit the signal over the plurality of logical communication channels (abstract). But, Rezaiifar in view of Amirijoo does not specifically teach a frequency hopping spread spectrum method.

However, Sayers teaches a frequency hopping spread spectrum method (col. 3 lines 65-67). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the above references with the teaching of the Sayers in order to assign the channel to the mobile terminal with requested rate and to avoid dead-spots.

As per claim 14: the feature of claim 14 is similar to the feature of claim 3. Hence, claim 14 is rejected on the same ground and motivation as claim 3.

As per claim 4: Rezaiifar further teaches a method, further characterized in that the control channel operates at the data rate (abstract, col. 3 lines 6-43), thereby using a lowest bandwidth and ensuring best sensitivity. However, Rezaiifar et al. does not specifically teaches the control channel operates at a lowest possible data rate, thereby using a lowest bandwidth and ensuring best sensitivity.

Sayers et al. teaches the control channel operates at a low data rate, (col. 3 lines 44-50). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Rezaiifar et al. with the teaching of the Sayers et al. of control channel with operates at a low data rate in order to utilize most of the channels capacity for physical traffic channels.

As per claim 19: the feature of claim 19 is similar to the feature of claim 4. Hence, claim 19 is rejected on the same ground and motivation as claim 4.

As per claim 8: Rezaiifar teaches a method, wherein the high data rate and the low data rate (col. 13 line 46 thru col. 14 line 14). However, Rezaiifar does not specifically teach about a high data rate that is between 32 k bits/sec and 256 k bits/sec and a low data rate that is between 16 k bits/sec and 32 k bits/sec.

Sayers et al. teaches the high data rate is between 32 k bits/sec and 256 k bits/sec (col. 4 lines 14-39) and the low data rate is between 16 k bits/sec and 32 k bits/sec (col. 4 lines 14-39). Therefore, it would have been obvious to one ordinary skilled in the art at the time the invention was made to modify the Rezaiifar et al. with

the teaching of the Sayers et al. of logical channel of data rate in order to provide the mobile terminal with the data rate requesting.

As per claim 21: the feature of claim 21 is similar to the feature of claim 8. Hence, claim 21 is rejected on the same ground and motivation as claim 8.

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Rezaiifar in view of Amirijoo, as applied to claim 17 above, and further in view of Fazel et al. (Fazel) (6,275,506).

As per claim 22: but, the above cited references do not explicitly teach about a communication system, wherein the communication device is a personal digital assistant (PDA). However, Fazel teaches a communication device which is a personal digital assistant (PDA) (col. 1 lines 4-15). Therefore, it would have been obvious to one skilled in the art at the time the invention was made to modify the above references with the teaching of Fazel in order to provide customer the choice of wireless device for transmitting and receiving variable data rate.

Response to Arguments

2. Applicant's arguments with respect to claims 1-10, 12 and 14-22 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Meless N. Zewdu whose telephone number is (571) 272-7873. The examiner can normally be reached on 8:30 am to 5:00 pm..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, William Trost can be reached on (571) 272-7872. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any inquiry of a general nature relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-2600.

Meless zewdu

Examiner

10 February 2006.


CHARLES APPIAH
PRIMARY EXAMINER